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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,860	09/29/2000	MARTIN M. BARRERA	NOVE10001000	9366

22891 7590 01/21/2003

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NEW HAVEN, CT 06510

EXAMINER

KIM, CHRISTOPHER S

ART UNIT PAPER NUMBER

3752

DATE MAILED: 01/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/675,860

Applicant(s)

BARRERA ET AL.

Examiner

Christopher S. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 24-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 and 24-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 13 June 2002 is: a) ☐ approved b) ☒ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 12, 2002 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Drawings***

3. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on June 13, 2002 have been disapproved because they introduce new matter into the drawings. 37 CFR 1.121(a)(6) states that no amendment may introduce new matter into the disclosure of an application. The original disclosure does not support the showing of the apparatus surrounded by a heater and an optional heater as proposed in figure 2.
4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "heater" recited in

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claim 11 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

5. Claim 2 is objected to because of the following informalities: in claim 2, line 3, -- said-- should be inserted after "having". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

6. Claims 1-21 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 1 recites "at least a first aperture...for injecting a first chemical vapor deposition fluid" in lines 9-10 and "at least one chemical vapor deposition fluid" in line 11. Claim 13 recites "at least a first aperture... for injecting a first chemical vapor deposition fluid" in lines 9-10. The disclosure does not enable an embodiment having more than a first aperture injecting a first chemical vapor deposition fluid. Claims 6 and 18 recite "at least a second aperture" in line 2. If the "at least a first aperture" recited in claims 1 and 13 comprise more than one aperture and the "at least a second aperture" recited in claims 6 and 18 comprise more than one aperture, there

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would appear to be two sets of apertures for two fluids. This does not appear to be taught in applicant's specification. Claims 26 and 27 recite "at least a third aperture" in line 2. If the "at least a first aperture" recited in claims 1 and 13 comprise more than one aperture and the "at least a second aperture" recited in claims 6 and 18 comprise more than one aperture and the "at least a third aperture" recited in claims 26 and 27 comprise more than one aperture, there would appear to be two sets of apertures for two fluids. This does not appear to be taught in applicant's specification.

***Claim Rejections - 35 USC § 102***

7. Claims 1, 3-10, 13, 15-21, 24-27 (as best understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Gwyn (4,397,422).

Gwyn discloses an apparatus comprising: an inlet 17; a throat region 19; at least a first aperture 20 (aperture 20 for the white colorant); at least a second aperture 20 (aperture 20 for the green colorant); at least a third aperture 20 (for the red colorant); an exit nozzle 15. Since "dopant" in claims 24 and 25 are not further limited, the paints or dyes of Gwyn have been considered to be dopants.

***Claim Rejections - 35 USC § 103***

8. Claims 2, 11, 12, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gwyn (4,397,422).

With respect to claims 2 and 14, Gwyn discloses the limitations of the claimed invention with the exception of the angle being forty to sixty degrees. It would have

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been obvious to one having ordinary skill in the art at the time the invention was made to have provided an angle of forty to sixty degrees for optimization dependent of application criteria, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

With respect to claim 11, applicant discloses a heater as prior art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have provided a heater to the device of Gwyn to heat the paint exiting the exit nozzle.

With respect to claim 12, Gwyn discloses the limitations of the claimed invention with the exception of the angle being twenty to forty degrees. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided an angle of twenty to forty degrees for optimization dependent of application criteria, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

### ***Response to Arguments***

9. Applicant's arguments filed November 12, 2002 have been fully considered but they are not persuasive.

In response to applicant's arguments that a heater is disclosed in the specification at page 13, lines 2-4, the specification appears to disclose a heated manifold but fails to disclose the details of the heater as shown in proposed figure 2,

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filed on June, 13, 2002. Applicant indicates a new proposed figure 2 in the response. No proposed figures are enclosed with the response. Applicant is requested to provide another submission of the newly proposed figure 2.

In response to applicant's arguments directed to the rejection under 35 U.S.C. 112, first paragraph, applicant is directed to the explanation in the rejection paragraph above.

In response to applicant's argument directed to the rejection under 35 USC 102, non analogous art is not a proper argument. Applicant claims an apparatus with recitation of intended use "for delivering a plurality of chemical vapor deposition fluids to a chemical vapor deposition chamber." A chemical vapor deposition chamber has not been positively claimed. The fluids of Gwyn are considered to inherently meet the broad definition of "chemical vapor deposition fluid" and "carrier fluid." The converging nozzle, constant diameter nozzle, and divergent nozzle of Gwyn inherently meet the "configure to" limitations just as applicant only claims such nozzle configuration. If other elements accomplish this "configure to" limitation, applicant appears to be missing essential elements in the claims for accomplishing this functional limitation. Finally, claim 13 does not claim a constant diameter exit nozzle. Claim 13 recites "such that said exit nozzle is an extension of said throat region having the same dimension as said throat region." The claim does not exclude an exit nozzle having portions that are not the same dimension as the throat region. It only requires that the exit nozzle have a portion with meets such a limitation. It is suggested that applicant use the transitional phrase "consisting of" to exclude elements not recited in the claims. Applicant claims an



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apparatus with recitation of intended use "for delivering a plurality of chemical vapor deposition fluids to a chemical vapor deposition chamber." No combination of the apparatus and the chemical vapor deposition chamber has been claimed. Gwyn discloses, in column 2, lines 22-50, relative sizes of the inlet chamber, throat, and outlet chamber to achieve pressure and flow rates. It is within the knowledge of one of ordinary skill in the art to vary the inlet and exit nozzle angles to achieve an optimum pressure and flow rates.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (703) 308-8336. The examiner can normally be reached on Monday - Thursday, 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (703) 308-2087. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7766 for regular communications and (703) 308-7766 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

CK  
January 16, 2003



**CHRISTOPHER KIM**  
**PATENT EXAMINER**